第 23 講　長文実践演習⑥

ポイント

① 直読法
② 因果の発見
③ 具体の発見

次の文章を読んで，下の問いの（　　）に入れるのに最も適当なものを，それぞれ下の①～④のうちから一つずつ選びなさい。

(1) Rats, mice, hamsters, and squirrels belong to a large group of animals called rodents. It is estimated that there are about 2,000 species of rodent, and they are believed to be one of the most successful groups of animals we know. They are considered successful because the rodent group accounts for over 40% of all mammal species on earth. Of all the rodents, the mouse-like rodents, such as those mentioned above, are probably the most successful and it has been suggested that what makes them so is their teeth.

(2) Rodents' teeth enable them to eat a wide range of food, such as leaves, roots, nuts, and seeds. All rodents have four very sharp teeth at the front of their mouths - two at the top and two at the bottom. These teeth are called incisors, but unlike the incisors of most other mammals, they never stop growing. So whatever their age, rodents will always have fresh, sharp teeth to eat with. In addition, they also have extremely strong muscles around their mouths, which enables them to bite through the shells of nuts and seeds. Many other mammals and birds cannot do this, so the seeds they eat pass through their bodies undigested, and the nutrition with them is unused.

(3) Nuts and seeds are very nutritious. Some seeds, such as sunflower seeds, sesame seeds, and peanuts, are very high in fat and protein. There are benefits of being able to eat these energy-rich foods: a lot of energy is gained in a short period of time; spending less time outside the home searching for food reduces the risk of being killed by other animals; and the time saved can be spent reproducing and looking after their young.

NOTE

(4) Successful reproduction is essential to the survival of a species. However, it can be a double-edged sword. That is, it has good points and bad points. Many rats and mice are eaten by other animals before they die of natural causes, so being able to reproduce quickly is a good thing as it increases the species' chances of survival. For example, a Norwegian rat could have 56 children and over 400 grandchildren within 20 weeks of being born. On the other hand, if reproduction is too successful and there is a huge increase in population in a short time, then there will not be enough food available for all of them to survive. When this happens, thousands and thousands die, resulting in a population crash.

(5) The survivors often survive, not always by chance but because they are slightly different from the general population in some way. Perhaps they can run faster or further and so get to food before the others; or they have a better sense of smell and find food that others cannot; or they have stronger jaws and sharper teeth and can open nuts that others cannot open. Which of these slight advantages they have over those that die is not clearly understood; however, those that do survive have the opportunity to reproduce and pass on their advantageous traits to a new generation.

(6) So together with their high rates of reproduction and the survival of those that have adapted in some beneficial way, mouse-like rodents are in a strong position to survive well into the future. Ultimately, however, what probably enables these mouse-like rodents to reproduce so successfully is the fact that their teeth allow them to eat highly nutritious nuts and seeds so they do not have to spend most of their time engaged in the dangerous activity of gathering food.

(11 センター　本)

NOTE

問１　Paragraph（2）states that（　　）.

① most birds and mammals can also digest the seeds they eat

② mouse-like rodents are not as successful as other animals

③ mouse-like rodents cannot bite into the center of nuts and seeds

④ rodents have four incisors and powerful muscles around their mouths

問２　In paragraph（3）, which of the following is NOT mentioned as a benefit of eating energy-rich foods?（　　）

① Eating food high in fat and protein helps rodents developed muscular bodies.

② It takes little time to get enough food to satisfy the body’s energy requirements.

③ Less time is spent being exposed to the dangers of being eaten by another animal.

④ The time that is not spent searching for food can be used for raising a family.

問３　According to paragraph（4）,（　　）.

① the good point of having many young is that they exhibit different traits

② the increase in the population of a species may lead to food shortages

③ the Norwegian rat is a good example of surviving food shortages

④ the population of rodents is kept down by natural death

問４　Paragraph（5）discusses（　　）.

① the breeding habits of rodents and other methods of repopulation

② the different kinds of successful rodent subspecies

③ the disadvantages that the surviving rodents face

④ the possible reasons why some rodents survive population crashes

問５　The theme of the passage is about（　　）.

① the advantages of using incisors for eating high energy food

② the mouse-like rodents and the reasons for their success

③ the relationship between the rodent population and the food supply

④ the rodents which account for the 40% of mammal species

問６　The contents covered in the passage are listed at random below.

(a) Sharp teeth and a powerful bite

(b) The likely explanation for survival

(c) Reproduction and population crashes

(d) A background to mouse-like rodents

(e) The advantages of high energy food

(f) Conclusion

Which of the following best reflects the flow of the passage?（　　）

① (b) → (a) → (c) → (d) → (e) → (f)

② (b) → (a) → (e) → (c) → (d) → (f)

③ (d) → (a) → (c) → (b) → (e) → (f)

④ (d) → (a) → (e) → (c) → (b) → (f)

復習テスト　　第二十三回

次の見出し語に相当する表現を選びなさい。

1. 推測する
① climate　② temperate　③ operate　④ estimate

2. 哺乳類
① mentor　② mural　③ mammal　④ moral

3. 消化する
① digest　② demand　③ determine　④ decrease

4. 種子
① sphere　② solution　③ sense　④ seed

5. 特色
① tension　② temptation　③ temperature　④ trait

6. 利用できる
① apprehensive　② available　③ applicable　④ attach

7. さらに
① in effect　② in accordance　③ in addition　④ in fact

8. 栄養素
① numerous　② nuclear　③ imperial　④ nutrition

9. 成功する
① successive　② successful　③ supportive　④ subscribed

10. 利点
① appointment　② adventure
③ adverb　④ advantage

NOTE

第 23 講　解答

< 解答・全訳 >

問 1　④　　問 2　①　　問 3　②　　問 4　④

問 5　②　　問 6　④

(1)　ドブネズミ，ハツカネズミ，ハムスター，リスは，げっ歯類と呼ばれる動物の大きな集団に所属している。げっ歯類にはおよそ 2,000 種が存在すると推測されており，私たちが知っている中では最も成功した動物の一つだと信じられている。それらが成功していると見なされているのは，げっ歯類が地球上のあらゆる哺乳類の 40 パーセント以上を占めているからだ。全てのげっ歯類の内，ハツカネズミのような上記で述べたげっ歯類がおそらく最も成功しており，おそらくその成功の理由は，その歯のおかげである。

(2)　げっ歯類の歯のおかげで，それらは葉，根，木の実，種のような幅広い食料を食べることができる。全てのげっ歯類に，上に 2 本，下に 2 本の合計 4 本の非常に鋭い前歯がある。これらの歯は門歯と呼ばれているが，他のほとんどの哺乳類のものと異なり，げっ歯類の門歯は決して成長が止まることはない。したがって，年齢が何歳であっても，げっ歯類は食用に，いつも新しく鋭い歯を持っていることになる。さらに，げっ歯類には，口の周りには極めて強い筋肉があり，そのおかげで，木の実や種の殻をかみ砕くことができる。他の多くのほ乳類や鳥類はこれができないので，それらが食べる種は消化されずに体を通過して，その栄養分は使われない。

(3)　木の実や種はとても栄養価がある。ヒマワリの種，ゴマ，ピーナッツのような一部の種子は，脂肪分やたんぱく質の点で栄養価が非常に高い。これらの栄養価が豊富な食料を食べられることには沢山の利点が存在する。沢山のエネルギーを短時間で得られる，食料を探すのにすみかの外で過ごす時間が少ないことで，他の動物に殺されるリスクを軽減できる，そして節約できた時間を子どもを産んだり，面倒を見るのに費やすことができる。

(4) うまく繁殖できることは，種が生きていくのに不可欠である。しかしながら，それは諸刃の剣にもなりうる。すなわち，利点もあれば欠点もある。多くのドブネズミやハツカネズミは自然死する前に，他の動物に食べられてしまうので，種の生存の可能性を高めるために，素早く繁殖できるのはいいことだ。例えば，ノルウェーのドブネズミは生後 20 週のうちに，56 匹の子と 400 匹以上の孫を持つ可能性がある。一方で, 繁殖があまりにもうまくいき, 短期間で個体数が大きく増加するなら, 全部が生存するのに十分なエサが手に入らなくなってしまう。これが起きると，何千個体も死ぬことになり，結果として全個体が壊滅してしまうことになる。

(5) 生き残る個体は，たいてい生き残るが，それは必ずしも偶然ではなくて，一般の個体とは何らかの点でかすかに違うからである。おそらくその様なものは，より速く，あるいはより遠くまで走ることができるので，他のものよりも先にエサに辿り着くことができたり，嗅覚がより鋭いので，他が見つけられない食料を見つけることができたり，あるいは，より強いあごと鋭い歯を持ち，他のものが開けない木の実を砕いたりすることができるのかもしれない。生き残るものが，死んでしまう個体よりわずかに有利なこれらの利点のうちどれを持っているかは，はっきりとわかってはいない。しかしながら，実際に生き延びる個体には，繁殖し，彼らが持っている利点を新しい世代に伝える機会がある。

(6) したがって，げっ歯類の高い繁殖率や，何らかの有利な点で適応した個体が生き延びることが合わさって，ハツカネズミと似ているげっ歯類は将来もずっと生きることができる強い立場にある。しかしながら，最終的には，ハツカネズミと似ているげっ歯類がなぜそんなにうまく繁殖できるかは，おそらくその歯のおかげで，それらは栄養価の高い木の実や種を食べることができて，時間の大部分を，エサを集めるという危険な活動に携わるのに費やさなくてもいいという事実だ。

第 23 講　重要語彙リスト

1	rat	ドブネズミ
2	mouse	ハツカネズミ
3	squirrel	リス
4	estimate	見積もる
5	species	種
6	account for	占める
7	mammal	哺乳類
8	mention	述べる
9	unlike	～と違って
10	in addition	さらに
11	bite	噛む
12	digest	消化する
13	nutrition	栄養
14	sesame	ゴマ
15	reproduce	繁殖する
16	essential	不可欠な
17	double-edged	諸刃の
18	that is	すなわち
19	available	手に入る
20	result in	～で終わる
21	crash	崩壊
22	by chance	偶然
23	jaw	あご
24	pass on A to B	A を B に伝える
25	trait	特色
26	adapt	適応する
27	beneficial	役立つ
28	fact	事実
29	be engaged in	～に携わる
30	gather	集める

第 23 講　音読用白文　①　②　③　④　⑤　⑥　⑦　⑧　⑨　⑩

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復習テスト　解答

第二十三回

1. ④	2. ③	3. ①	4. ④
5. ④	6. ②	7. ③	8. ④
9. ②	10. ④		